

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, listings, of claims in the application:

Claim 1 (canceled)

Claim 2 (currently amended): The instrument of claim 31 ~~+~~ wherein said first and second differential pressure switches are inside said enclosure.

Claim 3 (canceled)

Claim 4 (currently amended): The instrument of claim 31 ~~+~~ wherein said means for transferring said pressure is a first tube for transferring said pressure in said chamber to switches, a second tube for transferring said enclosure pressure to said first switch and a third tube for transferring said sealed chamber outlet pressure to said second switch.

Claim 5 (canceled)

Claim 6 (currently amended): The instrument of claim 31 ~~+~~ wherein said first and second differential pressure switches are connected in series.

Claim 7 (currently amended): The instrument of claim 31 ~~+~~ wherein said sealed chamber outlet is threaded for attachment to an outlet pipe.

Claims 8-19 (canceled)

Claim 20 (currently amended): The combination of claim 37 ~~19~~ wherein said instrument is an analytical instrument.

Claim 21 (currently amended): The combination of claim 37 ~~19~~ wherein said first and second differential pressure switches are connected in series.

Claim 22 (currently amended): The combination of claim 37 ~~19~~ wherein said sealed chamber outlet is threaded for attachment to an outlet pipe.

Claim 23 (currently amended): The combination of claim 37 ~~19~~ wherein said sealed chamber outlet vents to atmosphere and said sealed chamber outlet pressure is the pressure of said atmosphere.

Claims 24-28 (canceled)

Claim 29 (previously presented): A method for detecting a blockage in the outlet of a purged enclosure having an outlet monitoring device in said outlet, said outlet monitoring device having a sealed chamber with only one inlet, an outlet, only one path between said only one inlet and said outlet and a flow restrictor in said only one inlet and a flow restrictor in said outlet through which a purging fluid can flow, said method comprising:

flowing said purging fluid into said enclosure;

monitoring at a first differential pressure switch the difference in pressure between the pressure in said enclosure and said sealed chamber that results from said purging fluid flow through said first restrictor of said outlet device;

monitoring at a second differential pressure switch the difference in pressure between said sealed chamber pressure and the pressure outside of said enclosure that results from said purging fluid flow through said second restrictor of said outlet device; and

determining that either said first or second restrictors are blocked when said second or said first switches, respectively, are open when said purging fluid flows.

Claim 30 (previously presented): The method of claim 29 further comprising determining that said purging fluid flow is passing through said outlet device and not leaking out of said enclosure in another location if both of said differential pressure switches are closed.

Claim 31 (new): An instrument comprising:

- (a) an enclosure having an opening through which a fluid can flow;
- (b) first and second differential pressure switches; and
- (c) a sealed chamber in said opening, said chamber having only one inlet, an outlet and only one path between said only one inlet and said outlet through which said fluid can flow and comprising:

- (i) first and second restrictors through which said fluid can flow; and
- (ii) means for transferring the pressure in said sealed chamber to said first and second differential pressure switches, the pressure in said enclosure to said first switch and the pressure at said sealed chamber outlet to said second switch;

each of said first and second differential pressure switches having a predetermined actuation pressure and each of said first and second restrictors having a resistance to flow selected so that the pressure drop across said first restrictor for a given rate of fluid flow through said first restrictor matches the predetermined actuation pressure of said first switch and the pressure drop across said second restrictor for a given rate of fluid flow through said second restrictor matches the predetermined actuation pressure of said second switch.

Claim 32 (new): An instrument comprising:

- (a) an enclosure having an opening through which a fluid can flow;
- (b) first and second differential pressure switches; and
- (c) a sealed chamber in said opening, said chamber having only one inlet, an outlet and only one path between said only one inlet and said outlet through which said fluid can flow and comprising:

- (i) first and second restrictors through which said fluid can flow; and
- (ii) means for transferring the pressure in said sealed chamber to said first and second differential pressure switches, the pressure in said enclosure to said first switch and the pressure at said sealed chamber outlet to said second switch;

each of said first and second differential pressure switches having a settable actuation pressure and said first

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pressure switch settable actuation pressure is set to match the pressure drop through said first restrictor for a given rate of fluid flow through said first restrictor and said second pressure switch settable actuation pressure is set to match the pressure drop through said second restrictor for a given rate of fluid flow through said second restrictor.

Claim 33 (new): The instrument of claim 32 wherein said first and second differential pressure switches are inside said enclosure.

Claim 34 (new): The instrument of claim 32 wherein said means for transferring said pressure is a first tube for transferring said pressure in said chamber to switches, a second tube for transferring said enclosure pressure to said first switch and a third tube for transferring said sealed chamber outlet pressure to said second switch.

Claim 35 (new): The instrument of claim 32 wherein said first and second differential pressure switches are connected in series.

Claim 36 (new): The instrument of claim 32 wherein said sealed chamber outlet is threaded for attachment to an outlet pipe.

Claim 37 (new): In combination:

(A) an instrument comprising an enclosure having an opening through which a fluid can flow;

(B) a flow sensor comprising:

(i) first and second differential pressure switches;
and

(ii) a sealed chamber in said opening, said chamber having only one inlet, an outlet and only one path between said only one inlet and said outlet through which said fluid can flow and comprising:

(a) first and second restrictors through which said fluid can flow; and

(b) means for transferring the pressure in said sealed chamber to said first and second

differential pressure switches, the pressure in said enclosure to said first switch and the pressure at said sealed chamber outlet to said second switch

each of said first and second differential pressure switches having a predetermined actuation pressure and each of said first and second restrictors having a resistance to flow selected so that the pressure drop across said first restrictor for a given rate of fluid flow through said first restrictor matches the predetermined actuation pressure of said first switch and the pressure drop across said second restrictor for a given rate of fluid flow through said second restrictor matches the predetermined actuation pressure of said second switch.

Claim 38 (new): In combination:

(A) an instrument comprising an enclosure having an opening through which a fluid can flow;

(B) a flow sensor comprising:

(i) first and second differential pressure switches; and

(ii) a sealed chamber in said opening, said chamber having only one inlet, an outlet and only one path between said only one inlet and said outlet through which said fluid can flow and comprising:

(a) first and second restrictors through which said fluid can flow; and

(b) means for transferring the pressure in said sealed chamber to said first and second differential pressure switches, the pressure in said enclosure to said first switch and the pressure at said sealed chamber outlet to said second switch

each of said first and second differential pressure switches have a settable actuation pressure and said first pressure switch settable actuation pressure is set to match the pressure drop through said first restrictor for a given rate of fluid flow through said first restrictor and said second

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pressure switch settable actuation pressure is set to match the pressure drop through said second restrictor for a given rate of fluid flow through said second restrictor.

Claim 39 (new): The combination of claim 38 wherein said instrument is an analytical instrument.

Claim 40 (new): The combination of claim 38 wherein said first and second differential pressure switches are connected in series.

Claim 41 (new): The combination of claim 38 wherein said sealed chamber outlet is threaded for attachment to an outlet pipe.

Claim 42 (new): The combination of claim 38 wherein said sealed chamber outlet vents to atmosphere and said sealed chamber outlet pressure is the pressure of said atmosphere.